

**NEVADA DEPARTMENT OF
CONSERVATION & NATURAL RESOURCES**

STATE ENVIRONMENTAL COMMISSION

HEARING ARCHIVES FOR

REGULATORY PETITIONS

COMMISSION PETITION NO. 96018

LEGISLATIVE COUNSEL BUREAU (LCB) FILE NO. R-119-96

DOCUMENTS INCLUDED IN THIS FILE:

YES SECRETARY OF STATE FILING FORM

YES DISCLOSURE STATEMENT PURSUANT TO NRS 233B

REGULATORY PETITIONS

ORIGINAL DRAFTED BY COMMISSION

ADOPTED BY COMMISSION

YES AS FILED AND CODIFIED BY LCB

Secretary of State
Filing Data

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Regulations Only

Effective Date _____

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Governor's Signature

State Environmental Commission

Classification [] Proposed [] Adopted By Agency [xx] Temporary [] Emergency []

Brief description of action: LCB R-119-96 (Petition 96018) permanently amends NAC 444.842 to NAC 444.976 by adding regulations in NAC 445A that detail the processes used to evaluate and remediate contaminated soil, ground water, and surface water which poses a risk to human health or environmental quality. The regulations outline the activities necessary for release reporting, initial response, delineation of contamination, setting of standards, remedial activities and final closure of projects having environmental contamination. The regulations will allow for the use of risk based evaluations in remedial decisions. Responsibilities between the Division of Environmental Protection and the owner or operator regarding remedial activities are delineated.

Authority citation other than 233B: NRS 445A.425

Notice date: August 9, August 11, August 20 and August 26, 1996

Hearing date: September 10, 1996

Date of Adoption of Agency: September 10, 1996

**LEGISLATIVE REVIEW OF ADOPTED REGULATIONS AS REQUIRED
BY ADMINISTRATIVE PROCEDURES ACT, NRS 233B.066
PETITION 96018
LCB FILE R-119-96**

The following statement is submitted for adopted amendments to Nevada Administrative Code (NAC) 445A.

1. A description of how public comment was solicited, a summary of public response, and an explanation how other interested persons may obtain a copy of the summary.

Petition 96018 (R-119-96) was noticed three (3) times: August 9, August 20, and August 28, 1996, in the Las Vegas Review Journal and the Reno Gazette-Journal newspapers. Public comment was received from the U.S. Department of Energy and the Clark County Health District. The U.S. DOE (exhibit #6) commented that implementation of the regulation would be difficult since the regulators will have to determine what risk assessment models are applicable. They also stated that action levels need to be defined for cleanup of corrective action sites. The U.S. DOE also expressed concern about a variety of definitions used in the regulation. U.S. DOE also believes that action should be based on whether a hazard exists. U.S. DOE suggested an alternative method for setting a hydrocarbon action level. U.S. DOE wanted to see time constraints regarding the Division of Environmental Protection action on remediation standards. The Clark County Health District (exhibit #11) felt that MCL's should not be limited to groundwater standards. The county was also concerned about whether the exemption process provided in the regulation would be effectuated. The county had further technical comments regarding how to best chart program management. A copy of the written comments may be obtained by calling the Nevada State Environmental Commission (702) 687-4670 extension 3117, or writing to the Commission at 333 W. Nye Ln., Room 128, Carson City, Nevada 89710.

2. The number persons who:

- | | | |
|------------|--|-----------|
| (a) | Attended each hearing; | 35 |
| (b) | Testified at each hearing: | 15 |
| (c) | Submitted to the agency written comments: | 13 |

Note: Six written comments (exhibits #3, #4, #5, #7, #11 and #13) were received from the Nevada Mining Association, Barrick Goldstrike Mines, U.S. Department of Energy, Nevada Power Company, Clark County Health District, and Sierra Pacific Power Co. Two businesses testified at the Environmental Commission hearing of September 10, 1996, regarding corrective action standards regulations.

3. A description of how comment was solicited from affected businesses, a summary of their response, and a explanation how other interested persons may obtain a copy of the summary.

Comments were solicited from affected businesses by the notices in the newspapers, as outlined in #1 and by direct mail to interested persons subscribing to the Commission's mailing list. The Bureau of Corrective Action also notified and sent draft regulations to affected businesses. The Nevada Mining Association (exhibit #3) expressed concern over the method to establish corrective action levels for some polluting constituents. They were concerned that action levels to clean up sites will not be scientifically based. The Nevada Mining Association wanted to clarify that minor releases which can be excavated or neutralized are not subject to certain requirements. Barrick Goldstrike Mines (exhibit #4) wanted to limit the regulation to "hazardous" releases that were covered by other environmental regulatory programs. They stated that this regulation would govern the response of all the bureaus to releases of substances that are governed by the permit programs of the individual bureaus. They were also concerned with the definition of "action level", "remediation standard" and "corrective action". They recommended clarification about the definitions. Concern was also expressed that the remediation standards should not be more stringent than background levels. At the hearing Barrick Goldstrike supported the regulation. Nevada Power Company (exhibit #7) requested clarification between major and minor corrective action sites. They were also concerned about the definition of "regulated substance" for the need to exclude certain petroleum compounds. Sierra Pacific Power Co. (exhibit #13) stated that a written notification of a spill could cause extensive delay of remediation activities. They requested a clarification of when free floating petroleum product would require a remediation action. At the hearing a representative of the Henderson Industrial Site Steering Committee stated that they hadn't reviewed the proposed regulation and that the Commission should table the petition until they could spend the time to review the petition. A copy of the written comments may be obtained by calling the Nevada State Environmental Commission (702) 687-4670 or writing to the Commission at 333 W. Nye Ln., Room 128, Carson City, Nevada 89710.

4. If the regulation was adopted without changing any part of the proposed regulation, a summary of the reasons for adopting the regulation without change.

The permanent regulation was adopted at the State Environmental Commission hearing on September 10, 1996, with changes to the regulation. Changes were proposed during adoption of the regulation.

5. The estimated economic effect of the adopted regulation on the business which it is to regulate and on the public. These must be stated separately, and each case must include:

- (a) Both adverse and beneficial effects: and
- (b) Both immediate and long-term effects.

The proposed regulations are expected to have a beneficial impact to the regulated businesses by clearly defining the corrective action process and the conditions for cost recovery and by allowing flexibility in oversight. No adverse impacts to businesses are anticipated. The immediate and long term impact will be a simplified corrective action process with the overall reduction in costs for corrective actions. No adverse public impacts are anticipated and no significant short or long term effects are anticipated. The proposed regulations will streamline and simplify the remediation process, thereby reducing the cost to the general public.

6. The estimated cost to the agency for enforcement of the adopted regulation.

There will be no additional cost to the agency as a result of the addition of the proposed regulations.

7. A description of any regulations of other state or government agencies which the proposed regulation overlaps or duplicates and a statement explaining why the duplication or overlapping is necessary. If the regulation overlaps or duplicates a federal regulation, the name of the regulating federal agency.

There are no other state or government agencies which the proposed regulation overlaps or duplicates.

8. If the regulation includes provisions which are more stringent than a federal regulation which regulates the same activity, a summary of such provisions.

This regulation is not more stringent than federal regulations. The proposed regulations do parallel some of the regulatory requirements of the U.S. EPA through the RCRA (Resource Cost Recovery Act) and CERCLA (Comprehensive Environmental Response, Compensation, & Liability Act).

9. If the regulation provides a new fee or increases an existing fee, the total annual amount the agency expects to collect and the manner in which the money will be used.

No new fee is proposed nor is a fee increased by this regulation.

**ADOPTED PERMANENT REGULATION OF THE
NEVADA STATE ENVIRONMENTAL COMMISSION**

LCB File No. R119-96

EXPLANATION: Matter in *italics* is new; matter in brackets [] is material to be omitted.

AUTHORITY: NRS 445A.425

Section 1. Chapter 445A of NAC is hereby amended by adding thereto the provisions set forth as sections 2 to 33, inclusive, of this regulation.

Sec. 2. *As used in sections 3 to 33, inclusive, of this regulation, unless the context otherwise requires, the words and terms defined in sections 3 to 18, inclusive, of this regulation have the meanings ascribed to them in those sections.*

Sec. 3. *"Action level" means the level concentration of a hazardous substance, hazardous waste, or a regulated substance in soil, ground water, or surface water that is established pursuant to sections 26, 29 and 32 of this regulation and for which corrective action may be required by the director.*

Sec. 4. *"Administrator" means the administrator of the division.*

Sec. 5. *"Aquifer" has the meaning ascribed to it in NAC 445A.812.*

Sec. 6. *"Corrective action" means a permanent remedy that an owner or operator is required to take after a release of a hazardous substance, hazardous waste, or a regulated substance to prevent the substance or waste from posing a threat or potential threat to the public health or the environment.*

Sec. 7. *"Director" means the director of the state department of conservation and natural resources.*

Sec. 8. *"Division" means the division of environmental protection of the state department of conservation and natural resources.*

Sec. 9. *"Ground water" has the meaning ascribed to it in NAC 444.579.*

Sec. 10. *"Hazardous Substance" has the meaning ascribed to it in NRS 459.429.*

Sec. 11. *"Hazardous waste" has the meaning ascribed to it in NAC 444.843.*

Sec. 12. *"Operator" means a person in control of or having responsibility for the daily operation of a site, business, or other operation where a hazardous substance, hazardous waste, or a*

regulated substance is disposed of, used, or stored.

Sec. 13. *"Owner" means a person who owns property where a hazardous substance, hazardous waste, or a regulated substance is disposed of, used, or stored.*

Sec. 14. *"Person" has the meaning ascribed to it in NRS 445A.390.*

Sec. 15. *"Regulated substance" has the meaning ascribed to it in NRS 459.448.*

Sec. 16. *"Release" has the meaning ascribed to it in NAC 445A.345.*

Sec. 17. *"Remediation standard" means the level of concentration of a hazardous substance, hazardous material, or a regulated substance in soil, ground water, or surface water which corrective action is designed to achieve.*

Sec. 18. *"Surface water" has the meaning ascribed to it in NAC 445A.513.*

Sec. 19. *The provisions of sections 2 to 33, inclusive, of this regulation apply to any site, business or other operation where corrective action is required, unless the corrective action is required at:*

1. A facility for the treatment, storage, or disposal of hazardous waste that is issued a permit pursuant to NRS 459.400 to 459.600, inclusive, and the corrective action is required for any violation of NAC 444.8632.

2. A disposal site, as defined in NRS 444.460, and the corrective action is required pursuant to NAC 444.7481 to 444.7499, inclusive.

Sec. 20. *1. Except as otherwise provided in this section, if the owner or operator of a facility, or his designated agent, is required to give notice of a release pursuant to NAC 445A.345 to 445A.348, inclusive, the division shall require the owner or operator to conduct an assessment of the conditions at the site of the facility, including an assessment of the condition of the soil or water, or both, to determine the extent and magnitude of the contamination.*

2. The division shall not require an owner or operator to conduct an assessment of the soil required by subsection 1 if the level of contamination of the soil does not exceed the action level established for that soil pursuant to section 26 of this regulation because of the actions taken by the owner or operator of the facility pursuant to section 21 of this regulation.

3. An assessment conducted pursuant to subsection 1 must:

(a) Identify the relevant pathways specifically related to the site that affect public health and the environment; and

(b) Be approved by the division.

Sec. 21. *An owner or operator shall immediately take any action necessary to mitigate and abate imminent and substantial hazards to public health or safety created by the release of a hazardous substance, hazardous waste, or a regulated substance.*

Sec. 22. *1. Except as otherwise provided in section 25 of this regulation, the director may*

require an owner or operator to take corrective action if the release of a hazardous substance, hazardous waste, or a regulated substance contaminates soil and the level of contamination exceeds the action level established for the soil pursuant to section 26 of this regulation.

2. In determining whether corrective action is required, the director shall consider:

- (a) The depth of any ground water;*
- (b) The distance to irrigation wells or wells for drinking water;*
- (c) The type of soil that is contaminated;*
- (d) The annual precipitation;*
- (e) The type of waste or substance that was released;*
- (f) The extent of the contamination;*
- (g) The present and potential use for the land;*
- (h) The preferred routes of migration;*
- (i) The location of structures and impediments)*
- (j) The potential for a hazard related to fire, vapor, or an explosion; and*
- (k) Any other information specifically related to the site which the director determines is appropriate.*

Sec. 23. *1. Except as otherwise provided in section 25 of this regulation, if an owner or operator is required to take corrective action pursuant to section 22 of this regulation, the owner or operator may conduct an evaluation of the site, based on the risk it poses to public health and the environment, to determine the necessary remediation standards or to establish that corrective action is not necessary. Such an evaluation must be conducted using Method E1739-95, adopted by the American Society for Testing and Materials, as it exists on the effective date of this regulation, or an equivalent method approved by the division.*

2. The division shall determine whether an evaluation complies with the requirement of Method E1739-95, or an equivalent method of testing approved by the division. The division may reject, require revisions be made to, or withdraw its concurrence with the evaluation at any time after the completion of the evaluation for the following reasons:

(a) The evaluation does not comply with the applicable requirements for conducting the evaluation.

(b) Conditions at the site have changed; or

(c) New information or previously unidentified information which would alter the results of the evaluation becomes available and demonstrates that the release may have a detrimental impact on public health or the environment.

3. If the division rejects, requires revisions to be made to, or withdraws its concurrence with an evaluation, it shall provide written notice of its determination and the reasons for its determination to the owner or operator.

The owner or operator shall:

(a) Submit a revised evaluation to the division; or

(b) Carry out the corrective action required by the director.

4. Unless an evaluation is rejected by the division or returned to the owner or operator for revision, the director shall consider the results of the evaluation, the level of concentration of the hazardous substance, hazardous waste, or regulated substance in the soil, and the points of compliance to be elements of the plan for corrective action.

5. Method E1739-95, adopted by the American Society for Testing and Materials, as it exists on the effective date of this regulation, is hereby adopted by reference. A copy of the method may be obtained

from the division, free of charge.

Sec. 24. *An owner or operator who is required to take corrective action pursuant to section 22 of this regulation shall submit to the division a plan and schedule for completing the corrective action. Except as otherwise provided in section 25 of this regulation, the owner or operator shall not take any corrective action until the plan and schedule are approved by the division.*

Sec. 25. *The director may waive the provisions of sections 22, 23, and 24 of this regulation and require an owner or operator to take corrective action immediately after the release of a hazardous substance, hazardous waste, or a regulated substance that contaminates soil if the release:*

- 1. Has an actual or imminent impact on ground water; or*
- 2. Is hazardous to public health and safety.*

Sec. 26. *1. For the purposes of sections 22 to 25, inclusive, of this regulation, the action level for soil must be established at the following levels:*

(a) The background concentration or volume of a hazardous substance, hazardous waste or a regulated substance set forth in the permit issued to the owner or operator by the division.

(b) The presence of a petroleum substance in soil in excess of 100 milligrams per kilogram. The level of concentration must be measured using Analytical Method 8015, adopted by the Environmental Protection Agency and modified for petroleum hydrocarbons, as it exists on the effective date of this regulation, or an equivalent method approved by the division.

(c) If the potential for human exposure or damage to the environment from contaminated surface water or ground water is the primary pathway of concern, the presence of a hazardous substance, hazardous waste, or a regulated substance in soil at the level of concentration for that substance or waste listed in the Toxicity Characteristics Leaching Rule, 40 C.F.R. Part 261.24, as it exists on the effective date of this regulation. The level of concentration must be measured using Analytical Method 1311, adopted by the Environmental Protection Agency, as it exists on the effective date of this regulation, or an equivalent method approved by the division.

(d) If inhalation, ingestion, or dermal exposure is the primary pathway of concern or an applicable level of concentration is not listed in the Toxicity Characteristics Leaching Rule, the presence of a hazardous substance, hazardous waste, or a regulated substance in the soil at an appropriate level of concentration that is based on the protection of public health and safety and the environment. The appropriate level of concentration must be determined by the division using the Integrated Risk Information System, adopted by the Environmental Protection Agency, as it exists on the effective date of this regulation, or an equivalent method chosen by the division.

2. Except as otherwise provided by this subsection, if more than one action level for soil may be established using the criteria set forth in subsection 1, the most restrictive action level must be used. In no case may the action level be more restrictive than background concentration of the hazardous substance, hazardous waste or regulated substance.

3. The state environmental commission hereby adopts by reference:

(a) Analytical Method 8015, adopted by the Environmental Protection Agency, as it exists on the effective date of this regulation. A copy of the method may be obtained from the Environmental Protection Agency, at a cost of \$5.

(b) The Toxicity Characteristics Leaching Rule, 40 C.F.R. Part 261.24, as it exists on the effective date of this regulation. A copy of the rule may be obtained from the United States Government Printing Office, Washington, D.C. 20402, at a cost of \$28.

(c) *Analytical Method 1311, adopted by the Environmental Protection Agency, as it exists on the effective date of this regulation. A copy of the method may be obtained from the Environmental Protection Agency, at a cost of \$5.*

(d) *The Integrated Risk Information System, adopted by the Environmental Protection Agency, as it exists on the effective date of this regulation. A copy of the system is available on line through INTERNET and may be obtained from an Integrated Risk Information System Representative at (301) 496-6531, free of charge.*

Sec. 27. *1. Except as otherwise provided in this section, the director may require an owner or operator to take corrective action if the release of a hazardous substance, hazardous waste, or a regulated substance contaminates ground water and the level of contamination exceeds the action level established for the ground water pursuant to section 29 of this regulation.*

2. An owner or operator may submit a written request to the director for an exemption from the provisions of subsection 1. The request must be accompanied by such supporting information as the director may require. The director may grant the request if:

(a) *The ground water contaminated by the release is not a source of drinking water and is not likely to be a source of drinking water because it is economically or technologically impractical to:*

(1) Recover the water for drinking because of the depth or location of the water; or

(2) Render the water fit for human consumption; or

(b) *The total concentration of dissolved solids in the ground water is more than 10,000 milligrams per liter and the ground water is not reasonably expected to be a source of drinking water.*

3. The director shall not require an owner or operator to take corrective action pursuant to subsection 1 to achieve the remediation standard required by the division if the owner or operator files with the division a study which is acceptable to the division and which demonstrates that, based on a review of available technology and the prohibitive cost of the corrective action, it is not feasible to achieve the required remediation standard.

Sec. 28. *An owner or operator who is required to take corrective action pursuant to section 27 of this regulation shall submit to the division a plan and schedule for completing the corrective action. The owner or operator shall not take any corrective action until the plan and schedule are approved by the division.*

Sec. 29. *1. For the purposes of sections 27, 28, and 30 of this regulation, the action level for ground water must be established at the following levels:*

(a) *The presence of 1/2 inch or more of a petroleum substance that is free-floating on the surface of the water of an aquifer, using a measurement accuracy of .01 feet.*

(b) *The presence of a hazardous substance, hazardous waste, or a regulated substance in ground water at a level of concentration equal to the maximum contaminant level for that substance or waste established pursuant to the Safe Drinking Water Act (42 U.S.C. §§ 300f et seq.) and 40 C.F.R. Part 141, as those sections exist on the effective date of this regulation.*

(c) *A level of concentration equal to the background concentration of a hazardous substance, hazardous waste, or a regulated substance, if that level of concentration is greater than the maximum contaminant level established pursuant to paragraph (b).*

(d) *If a maximum contaminant level has not been established for a hazardous substance, hazardous waste, or a regulated substance, a level of concentration equal to:*

(1) The background concentration of the waste or substance; or

(2) An appropriate level of concentration that is based on the protection of public health and safety and the environment. The appropriate level of concentration must be determined by the division using the Integrated Risk Information System, adopted by reference in section 26 of this regulation, or an equivalent method approved by the division.

2. In establishing an action level pursuant to subsection 1, the division may consider:

(a) The presence of more than one hazardous substance, hazardous waste, or regulated substance in the ground water;

(b) Any potential threat the contamination may pose to sensitive areas of the environment; and

(c) Any other threat or potential threat to ground water that is specifically related to the site.

3. If more than one action level for ground water may be established using the criteria set forth in subsection 1, the most restrictive action level must be used.

4. The Safe Drinking Water Act (42 U.S.C. §§ 300f et seq.), and 40 C.F.R. Part 141, as those sections exist on the effective date of this regulation are hereby adopted by reference. A copy of those sections may be obtained from the United States Government Printing Office, Washington, D.C. 20402, at a cost of \$30.

Sec. 30. *Unless remediation of a release may be terminated pursuant to section 31 of this regulation, the remediation standard for ground water shall be deemed to be the action level of the ground water.*

Sec. 31. *1. After any corrective action required by section 27 of this regulation is begun, the owner or operator shall ensure that the contaminated ground water is monitored for not less than 1 year to determine the level of contamination in the water. The division shall determine the frequency of the monitoring, but in no case may the division require monitoring more frequently than once each month.*

2. After any corrective action required by section 27 of this regulation is completed, the owner or operator may terminate remediation of the release if:

(a) An assessment of the contaminated ground water is conducted and indicates that the level of contamination is consistently below the action level for that water established pursuant to section 29 of this regulation; or

(b) After the ground water is treated for not less than 1 year, the concentration of dissolved constituents in the water, measured monthly, fits a curve that is substantially linear and approaches zero slope at the final portion of the curve. The curve must be established using the following equation:

$$C = C_f + C_o e^{-kt}$$

Where: *"C" means the concentration of contaminant at "t" in micrograms per liter.*

"C_f" means the final concentration of the contaminant in micrograms per liter which the curve approaches asymptotically;

"C_o" means the difference between the final concentration of the contaminant and the concentration of the contaminant at time zero in micrograms per liter.

"e" means the base of the natural log or 2.718.

"t" means time measured in days.

" k " means the decay constant.

Sec. 32. 1. *The director may require an owner or operator to take corrective action if the release of a hazardous substance, hazardous waste, or a regulated substance contaminates surface water and the level of contamination exceeds the action level established for the water pursuant to subsection 2.*

2. *For the purposes of subsection 1, the action levels and remediation standards for surface water must conform to the standards for water quality set forth in NAC 445A.120, 445A.121, 445A.122, and 445A.144.*

3. *An owner or operator who is required to take corrective action pursuant to this section shall submit to the division a plan and schedule for completing the corrective action. The owner or operator shall not take any corrective action until the plan and schedule are approved by the division.*

Sec. 33. *The Administrator may hold such hearings as he deems necessary to obtain public testimony regarding any corrective action required to be taken pursuant to sections 2 to 32, inclusive, of this regulation which affects more than one owner or operator or members of the general public.*

END OF LCB FILE NO. R119-96 (PETITION 96018)